

U.S. Department of Commerce  
National Institute of Standards and Technology  
Gaithersburg, MD 20899

Certificate Number: 88-120  
Page 1 of 2

***National Type Evaluation Program***  
***Certificate of Conformance***  
***for Weighing and Measuring Devices***

**For:**

Jeweler's Balance  
Digital Electronic  
Model: U and X Series  
n: 6,100  
Capacity: 6,100 g  
Platform: 5" diameter

Accuracy Class: II

**Submitted by:**

Sartorius Corporation  
140 Wilbur Place  
Bohemia, NY 11716  
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Contact: Bernd Ludewig

**Standard Features and Options**

The specific models in this series, their capacities, scale divisions, and verification scale divisions are listed on page 2. The U and X series differ only in that the X series has a post-mounted display.

Semi-automatic zero  
Automatic zero-setting mechanism  
Weight units of:

grams, kilograms, carats, pounds, ounces, troy ounces, pennyweight

Temperature Range: 10 to 30 °C (50 to 86 °F)

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Original signed by Chief, Office of Weights and Measures

Issue Date: September 9, 1988

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Certificate No. 88-120  
Page 2 of 2

**Sartorius Corporation**  
**Digital Jeweler's Balance**  
**Model: U and X Series**

Application: The scale may be used as a jeweler's balance where the scale division value is suitable for the application. The scale may be used as a general purpose scale.

Identification: The identification badge is located on the right side of the scale.

Sealing: A pressure sensitive security seal may be placed over the cap covering the hole providing access to the span adjustment program. The cap is located on the right front of the scale.

Available Models:

<u>Model</u>	<u>Capacity (g)</u>	<u>e (g)</u>	<u>d (g)</u>
U 6100-*U2	6100	1	0.1
U 6100-XU2	6100	1	0.1
U 6-*U2	6100	1	1
U 6-XU2	6100	1	1
X 1493-*U2	6100	1	0.1
X 1493-XU2	6100	1	0.1
X 1493-*U2.1	6100	1	0.1
X 1493-XU2.1	6100	1	0.1

Test Conditions: The Model U 6100-\*U2 was tested. The scale was tested over a temperature range of 10 to 30 °C. The emphasis of the evaluation was on the device design, operation, and compliance with the influence factors requirements. Time dependence tests, temperature effect on zero tests, and voltage variation tests were performed. The range of the automatic zero-setting mechanism may be up to 0.3 since e = 10d. A laboratory permanence test was conducted. A load of approximately one-half scale capacity was applied to the scale over 100,000 times. The scale was tested periodically during this time. The results of the evaluation indicate that the device complies with the applicable requirements of NBS Handbook 44.

Type Evaluation Criteria Used: NBS Handbook 44, 1988 Edition

Tested By: J. Truex, B. Badenhop